Current Issue Review 85-15E

AIDS

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23 October 1985
Revised 28 November 1991

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Cat. No. YM32-1-85-15-1991-11E

ISBN 0-660-14468-9

N.B. Any substantive changes in this publication which have been made since the preceding issue are indicated in **bold print**.

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AIDS

ISSUE DEFINITION

The first case of Acquired Immune Deficiency Syndrome (AIDS) in Canada was reported in February 1982, eight months after the syndrome was first described in the United States. Since then, the number of individuals who have contracted AIDS has risen dramatically. Because of the severity of AIDS, the lack of an effective treatment and its pandemic nature, a great deal of public fear, as well as concern in the scientific and public health community has arisen.

AIDS is a consequence of an attack on the body's immune system which directly compromises an individual's ability to fight disease. Thus AIDS victims are vulnerable to unusual and fatal diseases. Because the complex nature of the AIDS viruses may preclude a cure or vaccine for many years, the projected number of individuals in Canada who will contract AIDS and require medical assistance is likely to place a strain on the existing medical care and social assistance programs.

BACKGROUND AND ANALYSIS

Since the recognition of AIDS, major advances have been made in understanding this complex illness. These include 1) the identification of risk factors, including social behaviours, which increase the probability of contracting AIDS; 2) characterization of the two viruses which are the primary cause of AIDS; and 3) the development of blood tests that can identify persons who have antibodies to these viruses. The latter usually indicates individuals who have the virus or who have been exposed to the virus. There are, however, many important questions which must still be answered before AIDS can be effectively controlled.

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A. Etiology

The causative agent of most cases of AIDS is a "retrovirus"* called the "human immunodeficiency virus", commonly referred to as HIV-1. Another virus, similar to HIV-1 but different enough in composition to be classified separately, has also been identified. This virus, now called HIV-2, produces similar clinical manifestations to those of HIV-1; however, there are indications that some strains of HIV-2 may not be as pathogenic. At first identified only in countries of West Africa, HIV-2 has now been found in most countries which have tested for it. For the sake of convenience, unless HIV-1 or HIV-2 is specified, this paper will use HIV when either or both viruses could be implicated.

HIV selectively infects cells of the immune system called T-lymphocytes, or more specifically, the T_4 (helper/inducer) type. The destruction of these cells eventually leads to the immunosuppression characteristic of AIDS. As well, HIV may directly infect specific nerve and brain cells, or by indirect means, produce irreversible damage to the central nervous system and control centres. The HIV-1 virus has also been isolated from a variety of cells of different organs and/or their secretions.

There is still debate and uncertainty about the "incubation period" for AIDS, i.e., the time period between infection by the virus and development of the syndrome. Researchers at the U.S. Centers for Disease Control (CDC) in Atlanta have calculated a range for the incubation period of HIV-1 of one to 14 years, with the average estimated at eight to nine years. A 1990 estimate of the incubation period was 10.6 to 13 years, with a median of 11.0 years. The incubation period of HIV-2 is not specifically known to be different from that of HIV-1; however, case studies have indicated a range from 11-19 years. The long incubation periods suggest that a large number of new cases will develop in the future, even if improved methods of prevention and control are realized soon.

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* A retrovirus is an RNA tumour virus containing the enzyme reverse transcriptase, which allows the virus to produce DNA copies of its own RNA template in the host cell, as opposed to normal DNA replication.

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There may also be a lag period of up to several years between the time of infection and the first detectable production of antibodies. This has led to a problem in effective screening of blood for HIV and several cases have been documented where individuals have contracted AIDS from blood thought to be virus-free. The probability of this event is still quite small and there is generally less risk posed for a recipient than if no blood transfusion were received. Recent evidence indicates that antibodies usually will be detectable in less than three months, and almost certainly within six months, after infection.

B. AIDS and Associated Diseases of HIV

Infection with HIV is associated with a broad spectrum of disease conditions although many individuals may be seropositive but asymptomatic. Some in this last group may be carriers of live virus while others have the antibody, but no detectable virus. Health and Welfare Canada states, however, that all HIV seropositive individuals should be considered potentially infective.

The development of AIDS may result in initial symptoms such as extreme malaise and fatigue, fever, night sweats, weight loss and persistent, unexplained diarrhoea. Often, victims will have symptomatic illnesses such as generalized lymphadenopathy (swollen lymph nodes), oral candidiasis (fungal infection in the mouth) and splenomegaly (enlargement of the spleen). Various laboratory and blood abnormalities are also common and, as the virus proliferates, the destruction of T_4 lymphocytes will continue. In the resulting immunosuppressed state, AIDS victims are susceptible to a number of other diseases often termed "opportunistic diseases", which typically become the cause of death. However, because the virus can infect nerve and brain cells, people can die from infection of the central nervous system but show no signs of "AIDS". Approximately 10% of AIDS patients present neurologic symptoms before other symptoms of AIDS and it is estimated that from 60% to 100% of AIDS patients may eventually demonstrate some form of neurologic infection, including dementia. There is no cure for AIDS at the present time and no patient has ever recovered from AIDS. A victim's life can be somewhat prolonged, however, and his/her

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health status improved for a time by appropriate clinical care for the opportunistic diseases.

Opportunistic infections, of which two predominant forms are described below, occur in about 70% of AIDS patients in Canada. About 50% of victims express symptoms of a rare form of pneumonia, known as *Pneumocystis carinii* pneumonia (PCP) but careful diagnosis indicates that the PCP virus is found in over 90% of AIDS patients. The disease is treatable but relapse is frequent and a patient may die as a result of PCP. Kaposi's sarcoma (KS), an otherwise rare form of cancer, occurs alone in about 16% of AIDS cases and in an additional 4% of cases where PCP also occurs. KS is a type of skin cancer with gastrointestinal, lymph node, and other organ involvement. The disease progresses rapidly and does not respond well to treatment.

C. Epidemiology and Modes of Transmission

The number of AIDS cases in Canada has increased rapidly since the first case was identified in 1982. As of 7 October 1991, 5,349 cases of AIDS had been reported to the Federal Centre for AIDS surveillance program, of which 59.7% (3,192 patients) had died. All persons diagnosed with AIDS are expected to die of the disease. A classification of adult Canadian patients with AIDS is shown in Figure I.

There is little direct evidence for the spread of HIV infection by routes other than those generally recognized -- i.e., intimate homosexual or heterosexual contacts, exchange of contaminated instruments such as needles and syringes among drug abusers, contaminated blood, blood products or transplanted organs, and transmission from mothers infected with HIV to the fetus or their newborn babies. However, in all countries examined, including Canada and the U.S., there is consistently about 3% of those who have (had) AIDS where the risk factor has not been identified.

Although the vast majority of North American AIDS victims are relatively young, homosexual/bisexual men, there is strong evidence that the virus is spreading into the heterosexual population and that heterosexual transmission may have already emerged as an important mode of transmission in some regions of the U.S. In areas of high prevalence, the

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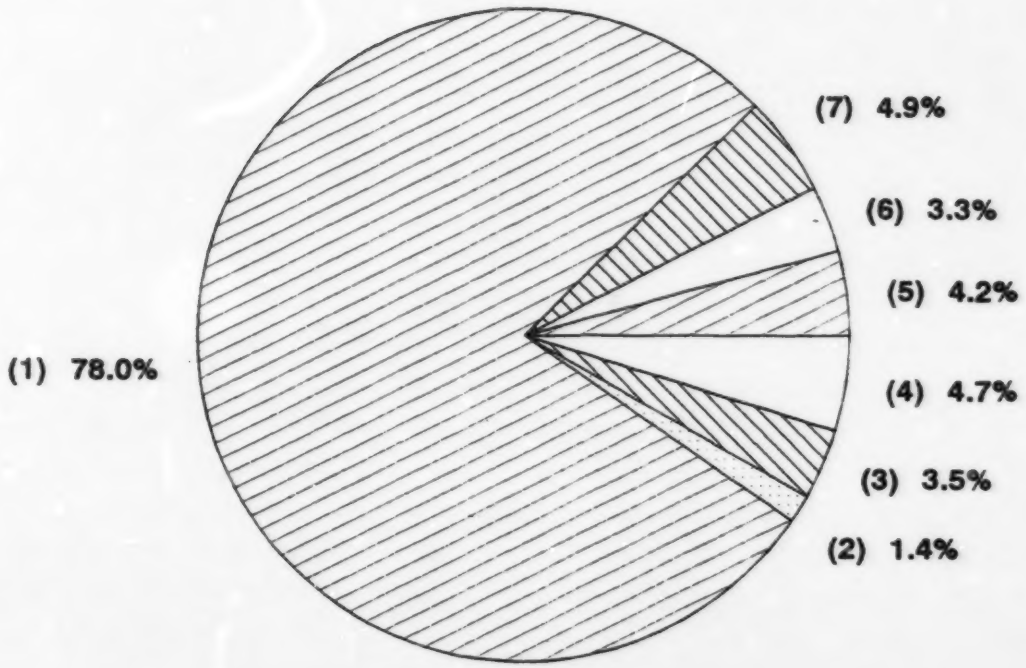
Figure I
AIDS In Canada
Percentage Distribution By Risk Factor

Adult Cases
7 October 1991



(1) Homosexual/bisexual activity (only)
(2) Injection drug use (only)
(3) Homosexual/bisexual activity and injection drug use
(4) Recipient of blood/blood products
(5) Heterosexual activity-origin in Pattern II country
(6) Heterosexual activity-sexual contact with person at risk
(7) No identified risk factors

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ratio of infected males to females is rapidly approaching the 1:1 male:female ratio found in Africa and Haiti where multiple heterosexual contact is considered to be a major risk factor. Worldwide, AIDS is transmitted primarily through heterosexual intercourse. As transmission has been documented from male to male, male to female, female to male, and female to female, multiple sexual contacts of any combination may increase the risk of infection. Since there is a lag time from transmission until symptoms develop, the extent to which AIDS has infected the North American heterosexual community is not really known.

Over the past year, concern has increased in Canada and elsewhere that AIDS poses a serious threat to women, in part because medical attention remains predominantly focused on homosexual men and intravenous drug users. For women, heterosexual transmission is the main route of HIV infection. Although an estimated three million women worldwide had HIV infection by early 1990, only 273 cases of AIDS in adult females had been recorded in Canada by 7 October 1991. HIV infection rates among Canadian women may be considerably higher than suggested by the number of AIDS cases.

In Canada, the highest rates of infection among childbearing women have been recorded in Quebec: in 1989, it was estimated that 988 women of childbearing age in the province had HIV infection. In the same year in Quebec, it was estimated that 1 in 1,638 women giving birth to a live infant had HIV: comparable 1990 data for Ontario and British Columbia/Yukon are 1:3,195 and 1:3,704, respectively. (In B.C.'s metropolitan areas of Vancouver and Victoria, it was estimated that 1 in 1,300 pregnant women in the 15-29 year age group carries the AIDS virus.) To help place these data in perspective, in 1988 there were 376,795 births in Canada.

Intravenous drug abusers are at a high risk because of the practice of sharing unsterilized needles, presumably contaminated with infectious blood. In Canada, only 74 people have been classified as having contracted AIDS by this mode of transmission alone, but an additional 187 people are associated with this risk factor as well as that of homosexual/bisexual activity (see Figure I).

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It is well known that the AIDS virus can be transmitted in whole blood to any blood recipient and in certain blood products used by hemophiliacs. As of 1 November 1985, the Canadian Red Cross (CRC) began testing all blood from donors for the presence of antibodies to HIV-1. Results indicate that only a low percentage of the donations have been confirmed positive (infected with HIV-1). Unfortunately, the discovery of HIV-2 has introduced a new concern about the screening of blood. Since HIV-2 is distinct from HIV-1, the blood tests now in place would not detect the presence of antibodies to HIV-2, which would indicate infected blood. Appropriate tests are being developed but to date are not being systematically conducted in any country, including Canada.

The use by hemophiliacs of coagulation factor concentrates from blood is believed to be the major risk factor for this group but preparation of these coagulation factors using a heat-treatment process to inactivate HIV was in full effect by June 1985 in Canada. Although the treatments were originally believed to be 100% effective, there is evidence that some heat treatments used to kill the virus did not always do so.

Most infants with AIDS were born to mothers who had AIDS or who had been infected with HIV-1; the National Advisory Committee on AIDS is urging voluntary blood testing for women who are pregnant or planning to have children. There is little doubt that transmission of HIV-1 occurs transplacentally during pregnancy as well as by breast-feeding or other close mother-to-infant contact shortly after birth. It is likely that the same modes of transmission will be found for HIV-2.

AIDS is not apparently transmitted through casual social contact. Even close contact with AIDS victims is a low-risk activity, as is demonstrated by the small number of trained health-care workers who have become infected but who were not already in a high-risk group. These cases are usually the result of "needle-stick" injuries with contaminated syringes or splashing of infected blood. There is also no evidence of transmission of the AIDS virus from infected health-care workers to individuals under their care. Such concern was voiced, for example, in one case where the AIDS-infected worker was a practising surgeon.

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The question of transmission of the AIDS virus through saliva is sometimes raised as a health concern, particularly in relation to biting. Although health officials acknowledge that there is some possibility of transmitting the virus in this way, the probability is believed to be extremely low. The concentration of the virus in saliva is also very low.

Of note is concern for contaminated dental equipment, particularly high-speed drills, of which a large percentage have retraction valves that could draw fluids (blood, saliva and/or water) back up into the instrument. This could contaminate the instrument and future patients. The American Dental Association has recognized this potential for spreading any bacteria or virus, including HIV, but the Canadian Dental Association does not acknowledge this as a health concern if proper procedures are used and the mechanism is flushed with disinfectant between patients. Many common disinfectants can effectively inactivate the viruses in most equipment.

D. Viral Natural History, Vaccine Development and Drug Efficacy

Substantial progress has been made in understanding the origins, natural history and molecular structure of the AIDS viruses. It is possible that a progenitor of the AIDS viruses may have originated in a monkey species from Africa which has subsequently crossed the "host-species barrier" to infect humans, a species which has little or no natural resistance to the disease. An understanding of the relationship of these viruses and their different effects might assist in the development of a vaccine.

On a somewhat less positive note, but still providing information which may help in vaccine development, are studies on the rapid rate of mutation of genes of the AIDS virus. This rapid rate of mutation presents problems similar to (but greater than) those found in trying to develop an influenza vaccine. As a result some researchers doubt that a single, effective vaccine may ever exist and that new vaccines will constantly need to be developed. The one hope, however, is that some regions of the gene are found to be conserved (do not mutate) and could

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possibly prove useful for vaccine development. Even though some clinical trials are being conducted, it is unlikely that any vaccine will be available for some time.

Antiviral drug therapies may encounter limitations to their effectiveness because of the neurologic infectivity of the virus. For example, many drugs are not able to cross the blood-brain barrier, rendering the brain an immunologically privileged site and a potential reservoir for reinfection even if a drug has been effective in other regions of the body. As well, direct cell to cell transmission may complicate drug effectiveness.

In spite of the difficulties, several antiviral drugs have been developed and two are now available for AIDS victims. The first and best-known drug is AZT (zidovudine). AZT was first released in Canada for restricted use in November 1986 and made more widely available in May 1987. The drug acts by interfering with the reproduction of the AIDS virus. AZT has side-effects for many persons so it cannot be taken by all AIDS victims. The drug is also very expensive, costing close to $10,000 per year for each patient.

In August 1989, AZT was made available to HIV-infected persons who had not yet developed symptomatic AIDS. This decision was based on two unpublished U.S. studies showing that AZT could delay the onset of AIDS in some HIV-infected persons. The decision was rather controversial and there is concern among some scientists that more data are needed on this aspect of AZT treatment.

A second drug, with action similar to that of AZT, is ddI (2,3 dideoxyinosine). This drug was made available in Canada for the treatment of AIDS in September 1989 under the Department of Health and Welfare's Emergency Drug Release Program. This drug is said to be less toxic to patients than AZT and has been successful with some patients who cannot tolerate AZT.

E. Social Aspects

The appearance of a new epidemic of an incurable and invariably fatal infectious disease has obvious and important ramifications

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for society. A major concern is to devise methods by which the spread of the disease can be controlled. To control the spread of AIDS, in October 1986 the U.S. Surgeon General noted that sex education, specifically addressing AIDS and safe sex, should start at the grade three level when children are of an age when they start enquiring about sex. At the same time, a report sponsored by the U.S. National Academy of Sciences and the Institute of Medicine stated that "sex education in schools is no longer only advice about reproductive choice, but has now become advice about a life or death matter" and that the "most fundamental obligation for AIDS education rests with the federal [U.S.] government." Despite discussions regarding the ethics of promoting the use of condoms to curtail the spread of AIDS, the use of latex condoms is generally an effective way of reducing the probability of virus transmission; however, condoms do not completely eliminate the risk of infection.

The fear of AIDS by the general public, employers, insurance companies, and even health care workers presents serious questions about the protection of human rights (e.g., confidentiality) and about the prevention of discrimination against HIV-infected persons and persons with AIDS (PWAs). In some countries, Canada included, legislation has been passed making AIDS a notifiable disease. In some countries, also, legislation requires persons at risk to be tested under threat of fines and imprisonment for non-compliance. Controversies have also arisen about the enrollment of infected children in school systems, mandatory testing in private schools, and the ethics of allowing infected dentists and surgeons to continue to practise.

A further concern regarding spread of AIDS is the presence of the virus in the prostitute community. In some studies, prostitutes surveyed indicated that they would continue to work as prostitutes, even if their blood tests showed they were positive for HIV. If the spread of the disease increases in the near future, these and other issues may assume a hard practicality and difficult human rights decisions will have to be made at some point.

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F. Programs and Funding for Prevention and Control

In June of 1988 the Department of National Health and Welfare boosted its resource allocation to the federal government's AIDS program by $129 million spread over the next five year period. This is in addition to the five year allocation in May 1986 of $39 million. Of the $129 million, $48 million was to be allocated for public education and information; $35 million for research on vaccines, drugs, epidemiology and drug trials; $20 million for projects at the community service level; $10 million for training of health and social workers; $10 million for Canada's Federal Centre for AIDS and $6 million was to be used to enhance Canada's participation in international efforts of assistance.

In June 1990, the Minister of National Health and Welfare presented the federal government's National Strategy on AIDS. Existing funds were re-allocated into five initiatives: (i) education and prevention; (ii) biomedical; (iii) coordination and collaboration; (iv) support to non-governmental organizations (NGOs); and (v) care, treatment and support. These initiatives will receive funding of $112 million over the next three years.

In the fiscal year 1990-91, the five initiatives will receive the following funding:

(i)	education and prevention	- $ 7.3 million
(ii)	biomedical	- $ 14.1 million
(iii)	coordination and collaboration	- $ 0.4 million
(iv)	support to NGOs	- $ 8.0 million
(v)	care, treatment and support	- $ 4.6 million

Education of the public has also been assisted through volunteer "grass-roots" organizations in several of Canada's major cities. These have involved AIDS hot-lines and frank information pamphlets directed to high-risk groups, as well as attempts to provide support for people with AIDS. Workers for these organizations usually assist on a voluntary basis and funding has largely been by donations or through fund-raising activities, although grants from various levels of government are now more readily available.

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The Red Cross blood screening program is expected to cost in the range of $8 million to $12 million per year, depending on the number of units of blood donated and the number of repeat tests required. All donated blood is to be tested. The potential for false positive results, which indicate probable virus infection when it is actually absent, and false negative results, which indicate virus-free blood when it is actually contaminated, still exists, but this screening of blood is expected to reduce the quantity of HTV-1 contaminated blood in the bloodbanks. Funds for the blood tests originate from a joint federal-provincial arrangement and are administered by the Canadian Blood Committee.

It is clear that the disease, which may place the victim in a dependent state of ill-health for a protracted period of time, will be very expensive. An AIDS patient could be in a state of poor health for several years after diagnosis, will possibly not be employable, and will require a long period of hospitalization or time in a palliative care facility. Although official Canadian figures that reflect the costs per AIDS patient are not yet available, a study conducted by a Quebec AIDS group in October 1986 indicates that an average AIDS patient spends 167 days in hospitals at a cost of $100,000, a figure in line with recent American estimates. A separate study, conducted by the Royal Society of Canada in 1988, indicated direct costs were approximately $82,500 per patient per year; they might now be as high as $100,000.

Whatever the exact amounts might be, the costs to society and the health care system are bound to be substantial. A study released by the Centers for Disease Control (CDC) in the United States says that the first 10,000 AIDS patients that have been treated in the U.S. will account for 1.6 million hospital days for a cost of U.S.$1.4 billion. Estimates of health care costs range from U.S.$46,000 to U.S.$146,000 per patient, the lower figure attained where community support groups play a major role. The CDC report also said that the first 10,000 AIDS patients treated would account for 8,387 years of work lost to disability and premature death and that such a loss would ultimately cost over U.S.$4.8 billion. Estimates indicate that in 1991 there will have been 270,000 persons in the U.S. who

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contracted AIDS. Medical care in 1991 is expected to cost between U.S.$8 billion and U.S.$16 billion, a figure that does not include home care or lost income (projected between U.S.$27 billion and U.S.$54 billion). Proportional costs can be expected for Canada.

The search for a cure, or effective preventive strategies, for AIDS will also be expensive. Concern has been expressed that health-care funds allocated for all aspects of AIDS might be found at the expense of funding of other health programs, inasmuch as any country's economic resources are finite. Therefore, as the disease continues to grow, it is clear that the AIDS epidemic will become enormously expensive at a variety of levels.

Future strategies for preventing AIDS virus infection will involve vaccine or specific anti-viral therapy, although no definitive solutions are readily visible. At present, prevention efforts will have to concentrate on providing up-to-date, accurate information and sound recommendations to individuals on how to prevent transmission. Coordinated public health and community group information programs should proceed now, even before definitive proof of the effectiveness of all the programs is available.

PARLIAMENTARY ACTION

On 8 May 1986, the House of Commons Standing Committee on National Health and Welfare completed a six-month study and tabled its final report entitled *AIDS in Canada* in the House. Extracts from the last paragraph of the report sum up the urgency of the issue:

> The urgency of effectively dealing with these issues related to AIDS in Canada cannot be overemphasized... AIDS will not disappear overnight...

The Ad Hoc Parliamentary Committee on AIDS, which was established in the spring of 1989, commenced public hearings on 7 March 1990 on the issue of a National Strategy for AIDS. The committee, under the chairmanship of the Honourable David MacDonald, M.P., includes both

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Members of Parliament and Senators. The committee released its report on its findings in June 1990.

CHRONOLOGY

June 1981 - AIDS was first reported by the Centers for Disease Control (CDC) in the United States and was incorrectly attributed only to promiscuous homosexual activity among males.

February 1982 - AIDS was first reported in Canada.

June 1982 - CDC reported that 20% of the U.S. patients were heterosexual IV drug abusers of both sexes.

July 1982 - CDC reported that hemophiliacs had contracted AIDS through blood products.

May 1983 - AIDS virus, LAV (lymphodenopathy associated virus) was discovered in France.

September 1983 - National Advisory Committee on AIDS was established in Canada.

April 1984 - AIDS virus HTLV-III (human T-cell lymphotropic virus III) was discovered in the U.S.A. - believed to be the same as the LAV virus.

March 1985 - U.S. approval of the first commercial screening test for the presence of AIDS virus antibodies in blood.

May 1985 - Heat treatment for hemophilia blood complexes initiated in Canada (100% in place by June 1985).

November 1985 - Blood screening of donated blood for AIDS virus antibodies began in Canada.

1 May 1986 - Minister of National Health and Welfare announced a $39 million, five-year plan to support activities dealing with AIDS in Canada.

8 May 1986 - Standing Committee on National Health and Welfare tabled its final report "AIDS in Canada", making 23 recommendations to the House.

1 March 1987 - Canadian Public Health Association launched its AIDS information public relations campaign.

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27 April 1988 - Royal Society of Canada Report made 48 recommendations for action in AIDS management.

8 June 1988 - The Minister of National Health and Welfare allocated an additional $129 million over five years to the federal government's AIDS program.

April 1989 - A Joint Committee on Aboriginal AIDS Education and Prevention was created to deal with AIDS in aboriginal communities. The Committee included nominees from aboriginal organizations, Indian and Northern Affairs, and Health and Welfare Canada.

15 May 1989 - The AIDS policy for the federal Public Service was published on the recommendation of Health and Welfare Canada, indicating, among other things, that Public Service employees will not be required to undergo mandatory tests for HIV infection.

July 1989 - The federal government, through Health and Welfare Canada, moved to establish cost-shared programs with the provinces to distribute free needles to intravenous drug abusers to limit the spread of the AIDS virus through needle-sharing. The federal government's contribution could reach $750,000 per year for a two-year program.

October 1989 - The federal government released a "Working Document for the Development of a National Strategy on HIV Infection and AIDS." The document was drafted by private consultants. The government hoped to finalize a National Strategy by the summer of 1990.

16 October 1989 - The Minister of National Health and Welfare announced that a new HIV Clinical Trials Network will be developed in Canada by the University of British Columbia at St. Paul's Hospital in Vancouver. The Network will improve the access of patients and physicians to clinical trials of drugs and vaccines for treatment of AIDS and HIV infection. When operational in early 1990, the Network is expected to cost between $2.5 million and $3 million each year.

December 1989 - The Minister of National Health and Welfare announced $3.8 million in federal funding for AIDS projects. The major recipient, the Canadian Public Health Association, received funding for two projects: an AIDS Education and Awareness Program ($900,000), and its National Clearinghouse on AIDS Information ($300,000). Another major recipient was the Canadian AIDS Society ($400,000).

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14 December 1989 - The Minister of National Health and Welfare announced a program of assistance to persons infected with HIV from blood transfusions or blood products. Each person so infected will receive $120,000. About 1,250 Canadians have been infected in this way. The assistance program followed extensive discussions with the Canadian Hemophilia Society. The program does not indicate assumption of legal liability or responsibility by the government for contaminated blood/blood products.

April 1990 - Ontario Health Minister Elinor Caplan approved a plan to permit anonymous testing for the AIDS virus. The plan involves a study of limited anonymous testing in selected sites in Ontario. Supporters of the plan believe that anonymous testing will encourage more persons in high-risk groups to be tested for HIV.

24 April 1990 - The Minister of National Health and Welfare announced the federal government's intention to establish a National Treatment Registry for persons with AIDS. The Registry will be known as the Treatment Information System for AIDS and HIV Infection (TISAH) and will be based at the University of Toronto. Initial funding is $1 million, with future guaranteed regular funding of $2 million annually.

15 June 1990 - The Minister of National Health and Welfare, Mr. Beatty, announced that Canada would boycott the Sixth International Conference on AIDS in San Francisco, to protest a U.S. law that restricts the entry of people with the AIDS virus. Many other countries, including France, Sweden and Great Britain, also boycotted the Conference. Numerous organizations, such as the Canadian Public Health Association and the International Red Cross, joined the boycott, but groups and individuals were not prevented by their national governments from attending. Some observers noted that Canada has similar restrictions on foreign visitors.

28 June 1990 - The Minister of Health and Welfare, Mr. Beatty, presented the National Strategy on AIDS. The Strategy does not include any new federal funding, but existing funds have been re-allocated, with the AIDS community Action Program (ACAP) receiving an approximate 40% increase for 1990-91 and two succeeding years. Reaction to the National Strategy has been cautiously positive. The opinion appears to be that it is really a Federal Strategy that has been developed and a true National Strategy can grow from that.

October 1990 - Anonymous blood testing of 67,078 newborn babies born in Ontario between October 1989 and July 1990 showed

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that 21 tested positive for HIV antibodies, for an indicated infection rate of 3.1 per 10,000. This rate was about double that which was anticipated. The blood test indicates that the mother is infected with HIV and the newborn has a 30-50% probability of being infected also.

November 1990 - The Federal Court of Appeal upheld a human rights tribunal ruling that employers cannot discriminate against workers who have AIDS or HIV infection. The ruling derived from a case where a railway cook was dismissed by Canadian Pacific Ltd. when it was disclosed that he was HIV-positive.

December 1990 - World AIDS Day, 1 December 1990, drew special attention to the impact that AIDS is having on women around the world, including the possibility that women will contract the disease in increasing numbers. It is estimated that a cumulative total of more than 350,000 cases of AIDS will have occurred among women by the end of 1992, three times as many as had occurred by the end of the 1980s.

2 April 1991 - The Minister of Health and Welfare, Mr. Beatty, in a speech to the Canadian Club in Toronto, urged Canadian business leaders to educate their work forces about AIDS and HIV infection. At the same time, the Minister released a workplace program kit prepared by the Canadian AIDS Society which includes a guide for managers and information to help educate employees about AIDS. The Minister was quoted as saying, "Persons with AIDS or HIV infection are entitled to the same rights, benefits and opportunities as employees with other chronic or life-threatening illnesses." A 1989 survey indicated that only 4% of Canadian corporations had an AIDS-in-the-workplace strategy.

11 April 1991 - Health and Welfare Canada announced that the Treatment and Information System for AIDS and HIV (TISAH), announced in June 1990 as a major part of the federal government's national AIDS strategy, had been taken away from the University of Toronto because of staffing and funding difficulties encountered by the professor in charge of the project.

30 October 1991 - The Minister of Health and Welfare, Benoît Bouchard, announced that the Federal Centre for AIDS would be phased out and its duties assumed by other units of the department. A national AIDS Secretariat has been created to serve as the departmental focal point of HIV/AIDS issues. AIDS surveillance and epidemiological research, and biomedical/laboratory research will be

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carried out by the Laboratory Centre for Disease Control. The Health Services and Promotion Branch will handle AIDS education and prevention strategies and funding for national and community-based groups, and for non-governmental organizations. A new unit of the Branch will be created to address care and treatment issues.

30 October 1991 - The Minister of Health and Welfare stated that he supported the distribution of condoms in prisons to help prisoners avoid infection by HIV. The Minister also said that the Solicitor General should consider distributing clean needles to prisoners for the same reason, even though the needles would be used to inject illegal drugs. The office of the Solicitor General stated that distribution of condoms is being given favourable consideration but that distribution of needles is not likely at this time.

SELECTED REFERENCES

Canada, Health and Welfare. *HIV and AIDS: Canada's Blueprint*, Ottawa, 1990, 56 p.

Canada, Health and Welfare. *Building an Effective Partnership: The Federal Government's Commitment to Fighting AIDS*. Ottawa, 1990. 37 p.

Canada, House of Commons, Standing Committee on National Health and Welfare. *Report on AIDS In Canada*. 9 May 1986.

Landesman, S.H., et al. "The AIDS Epidemic." Special Report in *New England Journal of Medicine*, Vol. 312, No. 8, 21 February 1985, p. 521-525.

MacDonald, Hon. David, Chairperson. *Confronting A Crisis: The Report of the Parliamentary Ad Hoc Committee on AIDS*. June 1990, 77 p.

Royal Society of Canada. *AIDS: A Perspective for Canadians*. Summary Report and Recommendations, Ottawa, Ontario, 1988, 31 p.

What Science Knows About AIDS, Scientific American Special Issue, October 1988, p. 1-152.

Wong-Staal, F. and R.C. Gallo. "Human T-Lymphotropic Retroviruses." *Nature*, Vol. 317, 3 October 1985, p. 395-403.